

NASA-STD-3001 Volume 2:
“Human Factors, Habitability and Environmental Health”
and the Human Integration Design Handbook
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For decades, Space Life Sciences and NASA as an Agency have considered NASA-STD-3000, Man-Systems Integration Standards, a significant contribution to human spaceflight programs and to human-systems integration in general. The document has been referenced in numerous design standards both within NASA and by organizations throughout the world. With research program and project results being realized, advances in technology and new information in a variety of topic areas now available, the time arrived to update this extensive suite of requirements and design information.

During the past several years, a multi-NASA center effort has been underway to write the update to NASA-STD-3000 with standards and design guidance that would be applicable to all future human spaceflight programs. NASA-STD-3001 - Volumes 1 and 2 - and the Human Integration Design Handbook (HIDH) were created. Volume 1, Crew Health, establishes NASA’s spaceflight crew health standards for the pre-flight, in-flight, and post-flight phases of human spaceflight. Volume 2, Human Factors, Habitability and Environmental Health, focuses on the requirements of human-system integration and how the human crew interacts with other systems, and how the human and the system function together to accomplish the tasks for mission success. The HIDH is a compendium of human spaceflight history and knowledge, and provides useful background information and research findings. And as the HIDH is a stand-alone companion to the Standards, the maintenance of the document has been streamlined. This unique and flexible approach ensures that the content is current and addresses the fundamental advances of human performance and human capabilities and constraints research.

Current work focuses on the development of new sections of Volume 2 and collecting updates to the HIDH. The new sections in development expand the scope of the standard and address mission operations and support operations. This effort is again collaboration with representatives from the Johnson Space Center Missions Operations and Space Life Sciences Directorates and the Engineering Directorate from Kennedy Space Center as well as discipline experts from across the Agency.